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CONTRIBUTED ARTICLES

Success with the Nucleus Method of Increase.

BY FRANK L. REHN.

LAST spring I had six colonies of bees, all on movable frames, eight to the hive, and desiring to increase as rapidly as possible, and yet so as not to impoverish the parent colony, it became a question to me as to what method would be best to adopt.

This being my first year in handling bees, it became necessary in order to succeed to thoroughly understand the manner of the natural increase of bees; after a close study of the bee, and a more close scrutiny of the bees on the frames at very near intervals, I determined to proceed; so, accordingly, on May 3 I set four colonies apart as those from which I would make my nuclei; the other two colonies I called into service later in a different way.

On May 3 I had but time to make two nuclei; on May 6

I made three more; May 13, 7; June 13, 6; Aug. 2, another; and Aug. 15, still another—making 20 nuclei from the four, and still leaving sufficient in each of the original four to recover, gather, and breed.

In making the nuclei I would have the new hives all prepared before I would open the parent colony, thus: I first nailed the body with two long nails just tight enough on the side to hold to the bottom-board temporarily; plug the entrance with fresh grass as tight as possible, and nail a strip of wood across so that not a bee could get out; and place a division-board and two frames with $\frac{1}{4}$ sheet of foundation in the hive. The hives being thus ready, and having the enamel-cloth and cover ready, I proceed.

Smoke the parent hive, and after a few minutes lift the cover, and remove the division-board; look for the queen, and remove the frame with her on it, and place it in an empty hive for the time being; then proceed to look for material for a nuclei.

I take a frame containing at least $\frac{1}{4}$ -frame of honey with adhering bees, and place it in the hive I wish the nucleus to occupy; then look at other frames until I find eggs that are under three days old—in other words, eggs that are standing straight up on end. This frame and clinging bees are put into the same hive alongside of the one with honey; then draw the two empty frames with foundation up to the bees, put on a cloth and cover, and locate it where I wish the hive to remain.



Summer View of the Apiary of Mr. Frank L. Rehn, of Delaware Co., Pennsylvania.



Winter View of the Apiary of Mr. Frank L. Rehn.

These operations must be done as rapidly as can be, so as to keep all bees that are possible on the frames before the effect of the smoke has worn off.

In this way I proceed until I secure all I want at that time. In some cases, where I found sufficient honey and eggs in one frame, and had sufficient clinging bees, I used that alone, or shook a few bees from another frame.

I replaced the frame with the queen in the old hive, and gave it several frames with foundation, replaced the cover, and let it alone for about a week or ten days, when I again went thru the same process.

There are three cardinal points to make this a success, I find, viz.: First, that the eggs must be under three days old; second, the bees must not be releast until after nightfall of the fifth day after dividing, and then only allow an entrance of about one or two inches; and third, that the cover must not be removed, or frames disturbed, until the eighth day after dividing.

On the eighth day I draw the two side-nails so I can raise the body from the bottom-board, and clear out the dead bees and examine the frames to see the number of queen-cells the bees have started and capt while closed up. In every case I have found at least six, and have had them in numbers varying up to 30 on a single frame. When I found quite a few, I would cut out some, and make more nuclei, and insert a couple of cells between the frames, and these queens would hatch about the same time.

The queens I reared in this way I have found to be large and prolific, and have yet to find the first one that I can say is "no good."

Every week or ten days I would go to the nucleus hives, go over them, and give them a gentle smoking to inform them I would prefer they would load up; raise the hive from the bottom-board, brush off any dead bees, and watch closely for any indications of moth or refuse; replace the board, examine the frames, and as soon as I see the queen is mated and laying nicely, I close down and mark the hive.

Then I go to the other two hives that I had reserved at the beginning, and take from them all the frames that contain any quantity of sealed brood; brush all the bees off, put them in an empty hive temporarily, and put frames with foundation in their place, putting them in alternately, as far as possible. There being all the bees and queen left behind, they take hold of the foundation immediately, and in a few days they have a perfectly full frame of comb filled with eggs.

The frames of sealed brood I give to every nucleus that I think would be better by a little encouragement, and in a few days it has a great quantity of young bees, which is very stimulating to the health of each young colony.

This process I practiced several times during the season. Every time I gave a frame of sealed brood, if I thought the colony was growing well in population, I would give one or two frames of $\frac{1}{4}$ -sheet of foundation, but being careful in every case to see that I did not scatter the bees over too many combs, and always keeping the combs on the east side of the hive, to warm up as early in the day as possible.

From one of the four original colonies used I made 12 nuclei the past season; and later, at three different times during the summer, I took two frames of sealed brood (with-

out bees)—that is, six frames in all—and in September I also took six frames of honey and gave to nuclei. On Oct. 15, when I packt this hive, it had eight frames exceedingly full of honey, bees, and brood. This queen is a leather-colored one, very long, and pure in color clear to the tip, but is mated with a hybrid drone; her bees have five bands, very plainly markt, but are somewhat cross in disposition, tho great gatherers and unexcelled breeders.

In every case each colony of bees gathered sufficient stores for winter, and when I packt them, the middle of October, all had a great deal of brood and bees, and all had eight frames.

Next year I shall change my method a little by rearing and using virgin queens, inserting each in a nucleus. I do not intend to limit myself in number, as I believe nobody knows until tried how great a number one can create from a single colony.

I herewith show a photograph I made of my apiary on the summer stands, and another of it in winter quarters, the latter showing all but two of the hives under one shelter. The back of the shelter is to the north.

Delaware Co., Pa., Nov. 27, 1890.



Qualifications of the Genuine Bee-Keeper.

BY G. M. DOOLITTLE.

AS the labors of the year 1899 have drawn to a close, and the long winter evenings of the first of the year 1900 are upon us, I thought that I might be excused if I were to say a few words on what I consider the duties of the apiarist along the line of spending these evenings in such a way that we may be gaining in knowledge regarding the pursuit we have chosen in life.

Having once chosen a pursuit in life, it becomes all to look after that pursuit with all diligence. In no business engagement is this more imperative than when the culture of the honey-bee is to be the occupation; and in no way can this be done to better advantage than in reading the bee-literature of the day. How often have I tried to get certain persons who were about to embark in bee-keeping by way of purchasing a few colonies of bees, to take a bee-paper, or to send for a good book on bees, only to be met with certain excuses which went to show that the person address would not make a success with bees.

A man or woman who is not willing to put a few dollars into the bee-reading of to-day shows by that very thing that he or she will not make a success of it; for had they the right kind of love for the little busy bee they would devour all the reading on the subject which came in their way as eagerly as a hungry man eats a good dinner. It is just this hungering and thirsting after knowledge regarding the practical part of bee-keeping that insures success; and unless a person does so hunger and thirst after knowledge along some special line of the many industries of the world, he or she will never make a success at anything, except, perhaps, it may be their working by the day or month, serving some one else. It is *only* the person who loves a calling in life who succeeds by and thru such calling.

One of the reasons why there are so many "calamity

howlers" in the world to-day is because there are so many who are more interested in loafing around and listening to idle gossip than they are in their chosen pursuit in life, and take more interest in a game of cards, chess or checkers, or hanging around the saloon or country store, than they do in studying on something which will lift them up morally and financially, or make them of real, practical use.

Besides the American Bee Journal take all the other bee-papers you possibly can; and, first, and before any of these, be sure to procure at least one good book on bees. Why I say procure the book, or books, *first*, is, that no man or woman is ready to understand the bee-papers until they are in a certain measure acquainted with the first or elementary principles of our pursuit. There is scarcely a week passes but what I receive lists of questions which I know would never have been asked had the writers a good book on bees, and had they read that book understandingly. From these books and papers the mind is stored with useful knowledge, which can be put in practical use as soon as the active bee-season of 1900 opens.

When I first thought of bee-keeping I procured the "Bee-Keepers' Text-Book," by King, and "Quinby's Mysteries of Bee-Keeping." As soon as I had read these I subscribed for the American Bee Journal and The Bee-Keepers' Journal, the two latter being all the papers there were devoted to bees at that time. All of this before I had a single colony of bees, and I was so interested in the books that I had them as familiar as a nursery rhyme. This, together with what I found in the bee-papers, placed me where I was ready to do something somewhat intelligently, and I procured my first two colonies in the spring of 1869.

That season was the poorest season I ever knew, but I recorded 12 pounds of honey and one swarm from the two old colonies, so I had three in the fall; but I had to feed some 40 pounds of sugar to give them stores enough for winter, which I did, as the books told me the way to do it. And that the readers may see where the price of honey once went, I will say I was offered 50 cents a pound for that 12 pounds of honey, right at my door.

I read and studied bees from all and everything I could find during all of my wakeful hours, and dreamed on them when asleep, and the reader will pardon me for saying that I am still doing the same thing, having greater zest in bee-keeping, and in raising it to a still higher standard, than in anything else.

When I read anything which I consider new and superior to what I am now using, I jot the name of the paper, number and page where it is to be found, on a piece of section, then I put it in the "pew" holding all such things which are appropriate to a certain month, having 12 of these "pews," and then when the month comes around I take out all there is in there, spread them out, and thus I have all of these valuable things before me.

Yea, more. When I am at work preparing hives, sections, queen-cages, etc., during the winter, or with the bees during the summer, my thoughts are always "running" on the subject of bee-keeping, and when something new strikes me, which thought seems of value, I "whip" out my piece of section and pencil, jot it down, and as soon as I arrive at the "row of pews," in it goes at the proper place, to spread out before me at the proper time.

Yes, further: Some of my dreams are jotted down; and allow me to say that one of the most useful things found in our queen-rearing of the present was "dreamed out," and put in practice as soon as I was awake, namely, the queen-cell protector. To be sure, it did not come in its perfection, as Mr. West now has it, but the thing in its crude form came in something seen in a dream by a bee-keeper having the bee-fever, and that fever has been raging now over 30 years.

In reading over the above, I see there is a good deal of Doolittle in it, and I beg the reader's pardon, but I really did not see how I could tell you just what I wanted to without giving some of my personal experience.

In conclusion, I wish to say in all kindness, if any person loves something else more than he does to study into bee-keeping, or does such study only as a sort of duty, let him be assured that he has mistaken his calling, and the sooner he leaves it and goes to that which at all times gives him pleasure the better off he will be in this world's goods, and the better it will be for the world.

If there are any who read this, who have no love for anything except to sit around all winter "whittling a stick," whirling the time away in that way, let me say to them that the world would have been better off without them, and that these lines were not intended for them, unless they can turn over a "new leaf." □

CONVENTION PROCEEDINGS

Report of the Illinois State Bee-Keepers' Convention.

The Illinois State Bee-Keepers' Association held its annual convention at the State House in Springfield, Dec. 26 and 27, 1899.

As some of the trains were late getting in, the forenoon of the first day was spent in getting acquainted with new members, and in a good, social time. At 1:30 p.m. the meeting was called to order by Pres. Smith, who addressed the meeting in a few well-chosen words. The secretary read the minutes of the last meeting, which were then approved. The treasurer's report showed that on account of our funds largely going to subscriptions for the American Bee Journal, our treasury did not become very flush.

The committee on legislation reported at length, reciting the ill-treatment they got before the House Appropriation Committee, when asking for a foul-brood law. Chairman Curtiss and Dr. Vincent, with only a few others, were our friends. Our Bill past the Senate without opposition.

FOUL BROOD.

The subject of foul brood was then discussed.

Mr. Black—If I had it among my bees it seems to me I would want to burn them, but I don't know how infectious it is.

Mr. Gastman—My bees had foul brood a number of years ago, and I would feel like burning them—hives and all—if they should get it again.

QUESTION—Can foul brood be brought thru the introducing of queens?

J. Q. Smith—In two cases that I know of it came in that way, but the queens came in 3-frame nuclei. I could not say as to their bringing it if they had come in cages thru the mail.

The following resolution was adopted:

Resolved, That it is the sense of this meeting that each member of the Association use his greatest influence with his candidates for the next legislature, to secure the passage of a foul-brood law.

A paper written by Dr. C. C. Miller was then read, on this subject:

Bee-Keeping as a Sole Business.

Now and again the questions come up, "How much profit is there in bees?" "Can one make a good thing of it with bees alone?" "Would you advise me to make a sole business of bee-keeping?" etc.

To meet such questions fairly and squarely is not always an easy matter. There are generally two sides to a question—sometimes more than two. Let us look at some of the sides of these questions.

John Smith got an average of 475 pounds of honey from each colony of bees in the year 1897. It is said one man can take care of 100 colonies without help. If he should get 475 pounds from each of a hundred colonies, and if it should be sold for 9 cents a pound, that would make \$4,275 a year, and in ten years that would amount to the snug little sum of \$42,750, the interest of which might support him for the rest of his life without work.

That looks very nice on paper, but it may be well to mention some modifying items. John didn't get that amount of honey every year. The two preceding years he got no surplus, and some years his bees not only gather no surplus, but have to be fed to keep them from starvation. Take one year with another, and he can get no 9 cents a pound for extracted honey. He has kept only a small number of colonies. With 100 colonies there would be a slump in his average yield. Few locations have such honey-yielding flora, and it is not likely that in his lifetime will John ever again meet with conditions so favorable as in the year mentioned.

It is not an uncommon thing to hear this or that man say that nothing on his farm has paid better for the amount invested than his bees. He will give plain figures for it to show that \$50 invested in 10 colonies of bees netted him more clean money than twice the amount invested in

cattle. That being the case you would expect him to give up to a large extent the keeping of cattle and invest heavily in bees. As a matter of fact, in nine cases out of ten you will find little or no increase in his bee-business, if indeed he has not gone out of the business altogether.

The man who holds the highest record for getting the most honey from one colony, of any man in the United States (1,000 pounds), has never been reported as having gone largely into the business, and it would be nothing so very surprising to hear that he now has very little to do with bees.

One who thinks of making a sole business of bee-keeping should understand that the element of uncertainty cuts a large figure in the case. Added to other items of uncertainty is the one that no bee-keeper can ever feel secure in the tenure of his pasturage. He may have a thousand head of cattle with sufficient acreage to support them, and feel perfectly secure that no one will trespass upon his pasturage. But he has not the least assurance that he can hold undisputed possession of the pasturage for his bees for a single year. There is no way by which he can prevent another man, or ten of them, from occupying the same territory that he does. Whether legislation could be secured that would make him as secure of pasturage for his bees as he is for his cattle is hardly a question just now to be considered. Even if legislators were favorable to it, bee-keepers would none of it. At least they would not when such a thing was talked about some years ago. It was admitted by all that when a man had prior possession of a certain locality for bee-keeping, no man had the moral right to intrude upon that ground if it was already fully stocked. But by some strange process of reasoning it was thought wrong to establish as a legal right that which was already a moral right. As if one should say no man had a moral right to steal, but there should be no legislation against stealing.

All things considered, the man who makes money his god will do well to steer clear of bee-keeping. But there are those who do not consider money the sole aim. To a man with a taste for the business, and a good location for it; who loves to get close to Nature, and have a life of enjoyment in the present; who loves health, and hard work in the open air, bee-keeping holds out inducements hard to be met with elsewhere. In any case, if no drop of honey should be secured, there should be enough bees in the land to assure proper fertilization for all the flowers that depend chiefly upon bees.

C. C. MILLER.

Mr. Gastman—Is there any place in Illinois where you can depend upon a crop of honey every year?

Mr. Hyde—On the Mississippi River I have had about one failure in 8 or 10 years.

Mr. Black—I fail oftener than that.

Mr. Becker—I do not believe there is a place in Illinois where you can depend upon a good crop every year.

QUESTION-BOX.

Miss Coulter—From what flowers do bees get the most of their honey?

Mr. Gastman—From sweet clover.

Mr. Becker—In different localities, from different flowers.

Miss Kennedy—I got 2,200 pounds of white clover honey the past season. Two years ago I got 3,000 sections filled.

Mr. Gastman—Do people generally like basswood honey?

Mr. Black—Not at first taste. If basswood honey is allowed to drain as it candies, it will get rid of its unpleasant taste.

Miss Coulter—How do you know if the bees have honey enough to carry them thru the winter?

Twenty to 25 pounds was answered.

Mr. Gastman—How can I keep my bees from swarming when I am away from home?

Several advised clipping the queens; others to divide the colonies.

Mr. Becker—Do bees gather honey from red clover?

Mr. Black—I saw bees this year working as strong on red clover as I ever saw them working on white clover.

The premium list committee for last year made a report, which was approved.

On motion of Mr. Black, the committee was continued for the next year—namely, the executive committee, composed of the president, secretary and treasurer.

The convention then adjourned till 9:30 a.m. the next day, with no night session, so that members could attend the meeting of the State Horticultural Society.

SECOND DAY.

At 9:30 a.m., Wednesday, Dec. 27, the meeting was called to order, with Pres. Smith in the chair.

A paper by Mr. S. N. Black was read, on

Wintering Bees.

Upon the subject of wintering bees I hope to learn rather than impart information. Tho I have had over 50 years' experience, there are some results that I can not account for.

The first requisite for successful wintering is sufficient well-ripened stores; and what may be enough for one winter may not suffice for the next.

The next, and of great importance, is ventilation, and I do not think it makes much difference how it is obtained, whether from bottom or top.

Dryness comes next in importance, and it would seem entirely essential were it not for the fact that some very wet winters, when the combs got very moldy, the bees came out very strong, and built up unusually soon.

Shall they be kept in the cellar or out-of-doors? Perhaps I have not had enough experience with in-door wintering to speak positively, having wintered bees in the cellar but four or five winters. My experience is in favor of out-door wintering. In the cellar the bees always consumed less honey than out-of-doors, but used much more after they were put upon their summer stands, and did not build up so rapidly in the spring as those wintered out-of-doors. However, had I a cellar or a room that I could keep just below the freezing-point, I would always use it, from the fact that I had one winter's trial of such temperature with a wonderful good result.

I had about 80 colonies in a pile, with carpet over the top, and the thermometer about 28 degrees for 90 days. The bees kept very quiet, and there were fewer dead bees than I ever saw, a smaller consumption of honey, and the bees built up very quickly, and very early. I do not know of any practical way that a temperature of 28 degrees can be maintained one season with another.

Then what kind of hives, or fixing, is the best? The chaff hive I have not used, and dislike to condemn that which I have not tried; but they are costly, bulky, and have many disadvantages; and the result does not seem to warrant their use. The experience of many years leads me to think them unnecessary.

With single-walled hives, with proper stores and ventilation, I have been so successful that for the present at least I shall winter bees on the summer stands, being careful to keep the entrance free, turning back one end of the painted cloth above the frames, covering the opening with burlap folded; or, better, with something woollen, leaning a broad board in front of the hive to keep the sun from the front on cold, sunny days. I prefer the hives to front south. I then leave the bees to their fate, with confidence that my loss will be small. So prepared, my loss has been small, not 5 percent. Three times since I have been keeping bees my loss has been heavy—one heavy loss I attributed to poor food, once to long, extreme cold, and once I could give no reason. Doubtless some other localities might require other treatment.

Were it not that long papers are not good for a convention, I would go into further details, such as, Can we use any absorbents to aid in keeping hives dry? etc.

S. N. BLACK.

Mr. Black—How can you keep moisture out of the hives?

Mr. Becker—I put a lot of large corn-cobs into the oven and dry them thoroly. Place two or three above the brood-frames and over them burlap. It seems to attract the bees to the space, and they get from frame to frame better than otherwise.

Geo. Poindexter—I have been in the habit of wintering bees in the cellar; I had them too closely confined, and came nearly losing them. Last winter I packed straw in the upper part of the hives above ducking, with good results. I have packed the same way this winter, leaving the ducking lapt back at the edges.

Mr. Becker—When we have an abundance of honey in the fall, and plenty of young bees, the loss will be small.

Pres. Smith—With hives not painted the bees winter better, because the sun dries the moisture out of the boards.

Mr. Black—I had a hive of bees knocked over on its side by a cow, one evening when the mercury was 30 degrees below zero; the bees lived and were all right the next day.

Mr. Hyde—Out of 125 colonies I lost five by cold weather. Some had 25 or 30 pounds of honey after they

were dead. I have known bees to live all winter in a hive lying on its side.

Mr. Black—I think Spanish-needle honey is as good as any for bees to winter on.

The committee on premium list reported a revised list, which was adopted.

The election of officers for the ensuing year resulted as follows:

President—J. Q. Smith; vice-presidents—1st, S. N. Black; 2nd, Geo. Poindexter; 3rd, W. H. Hyde; 4th, Miss Bird C. Coulter; 5th, Miss L. C. Kennedy; secretary—Jas. A. Stone, Bradfordton; treasurer, Chas. Becker.

A paper by Mr. G. M. Doolittle, of New York State, was read, on

Burr-Combs or No Burr-Combs on Top-Bars.

Your secretary has asked me for a paper to be read at your meeting. I don't believe in long, dry, exhaustive papers to be read at a bee-keepers' convention. Do you? Right here is a chance for a discussion among your members, and for them to let the bee-keeping world know what they think in the matter.

I believe that the paper to be read at a bee-convention is not the one that thinks for you, but the one that makes you think. Is my belief right? If you have any lazy, go-as-you-please members, here is a chance for them to show that Doolittle's belief is wrong.

But to bee-keeping more direct. We have been told of late that burr-combs on top of the brood-frames are a thing not to be tolerated, and thick top-bars for the frames are made and advocated to-day. Is this a move in the right direction? I hope you will not all stampede en masse in one direction, for if you do no light will be obtained. Perhaps Dr. Miller will suggest an "I don't know," if the rest of you are sure.

During the past poor season I had several colonies which did not have a single burr-comb on the top-bars of their frames—or "ladders," as I prefer to call such burr-combs—while the majority of the colonies had all the way from one to 15 ladders on top of the frames, when the surplus arrangement, filled with sections, was placed on the hives. I always leave these ladders on the tops of the frames to the amount above named (these ladders save using a Hill's device or sticks over the frames in winter), but remove all from the bottoms of the supers when they are taken from the hives. The result was that the colonies in hives having no ladders gave an average result of nearly 10 sections less than did those having them, and I have had experience very similar before. Did the ladders, by inducing the bees to enter the sections more quickly, cause the result? Here is a chance for some good, deep thinking and experimenting.

If the ladders were not the cause, are there any suggestions to be made as to the same? Suggestions in order.

If the ladders were the cause, then they were to my benefit of not far from \$1.20 per colony for those which had them, as the 10 sections averaged me 12 cents each. Now, which will pay the best, thick top-bars and no burr-combs or ladders, or \$1.20 per colony with the burr-comb "nuisance," as it is called?

Making my best bow, I retire. G. M. DOOLITTLE.

Mr. DeLong (of Nebraska)—If the space is made smaller, there will be but little bridging. They need the bridging to climb over the space; take away the space and the bridging will not occur.

Mr. Becker—I think they make the most bridging when they are gathering the most honey.

Mr. Black—I have seen them, when they were getting honey rapidly, wedge it in at the ends of the brood-frames, and in every place where the least space occurred.

The secretary asked the opinion of the convention as to what they thought of tacking thin strips of wood on the tops of the brood-frames to take up the space, the same as we suppose the thick top-bars do it. He had thought of trying it. But as none had tried it, there was no reply.

A resolution of thanks to those who so kindly furnished valuable papers was read and adopted.

Adjourned *sine die*. JAS. A. STONE, Sec.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.



The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

DISPOSING OF INFERIOR HONEY AT HOME.

I wish to think out loud a little on one line of an editorial note found on page 777 (1899). "Sell inferior kinds at home, or give them away." 'Spects that depends upon which market one leans most upon, and cares most about. The home market is easier cultivated, and far easier to hold against all comers, than the city market. A really lively and first-class home trade can not be kept up permanently if much poor honey is sold—not even if you tell them it is poor, and only accept half price for it. No man having drunk ripe old wine straightway desireth the raw, new article. And no kids eating good syrup (such as mammy makes on the stove, and perfumes the house with when she boils it over, as she mostly does), no such happy kids straightway desire poor honey. Poor honey is a desperate problem. Doubtful if it has any legitimate field, except to be given back to the bees in warm spring weather. I have sometimes taken pains to give poor honey to families unlikely to buy; but something within me protested pretty loudly against it. Training up some of the best men and women, about to be, to consider honey rather poor stuff, and to be poor honey customers. Of course, all this does not apply to those samples of honey which are poor merely in looks.

SMALL TREES VS. BIG TREES IN THE APIARY.

The apiary of Mr. Page, which opens out No. 49 (1899), is a fair representative of a large class of nice-looking, well-kept, well-painted apiaries with small trees sprinkled about—makes those of us who are curst with lots of big trees feel inclined to quarrel with our "lot."

QUEENS CHEAPER NOW THAN SOME YEARS AGO.

Twenty-five dollars for a queen, and \$3.75 to the express company for bringing her! Surely, we have made a trifle of progress in cheapness since that day "some years ago" which Mr. Didwell tells of on page 770.

WHITE CLOVER HONEY BETTER FARTHER NORTH.

Pres. Whitcomb is evidently on the track of the truth in explaining that white clover honey is better the farther North we go (provided we keep down in well-settled latitudes, that is), while heartsease is rather inclined to be the other way. As a general rule, I think we may expect every plant to yield better, both in quality and quantity, where it flourishes best. And most of the leading honey-plants will grow, if a little pains is taken with them, where they will scarcely yield nectar enough to attract a bee at all. For instance, almost any reader of this journal can have a patch of alfalfa in his garden, if he wants to; but comparatively few of them would ever see it visited eagerly by bees. Page 771.

HANDY RULE TO DETECT QUEENLESSNESS.

Handy rule from Mr. Coggsall. If there are queen-cups in the super, and they are *polished out*, the colony below is queenless. Page 771.

CURE FOR INKY DROPS FROM SMOKER.

The cure for inky drops has at last been hammered out pretty nearly to perfection. ("Iron sharpeneth iron; so a man sharpeneth the countenance of his friend.") But still I'll mix in once more, as one important fact in the matter has not been clearly mentioned, so far as I have noticed. Sound wood, altho it will let much of its moisture go without resistance, can not be made to part with all its moisture—not even nearly all—by any process which the apiarist is likely to use. I think (without having positive evidence at hand) that rotten wood of the soft and whitish fiber sort is readily dried to pretty nearly absolute dryness. Probably few or no kinds of rotten wood hold onto moisture with the desperate grip characteristic of sound wood. So the points are, stop most of the condensation by a warm nozzle, cut off the needless supply of watery vapor by using dry fuel, and

look a little out for those fuels which can not be dried except in part. Page 776.

LIKE A WOMAN'S LAST WORD—BUT SENSIBLE.

It may sound a little like a woman's last word, but all the same it's a sensible word, where the editor says, "Don't use barrels unless you know that *you* can use them without leaking." Page 776.

COLOR CARDS FOR GRADING HONEY.

I hardly know where I stand as to the proposed color cards to grade honey by (page 777). My practice has all along been to look thru honey to grade it; yet I am aware that strong objections can be made. Between a greasy-looking section with the cappings touching the honey—said honey being white—and a section with snow-white capping and deep air-space over quite dark honey, I strongly suspect a majority of customers would choose the latter, as more ornamental and just as good to the taste.

ASTER AS A HONEY-PLANT.

A botanist would be apt to smile audibly at Mr. Schmidt's fear that folks may think there are two kinds of aster, when really there is but one. The flora I use describes *forty-one* species, not counting those of the Gulf region and Pacific coast, either. The picture is very life-like, and the species it shows is the leading one here, at Ohio's north line, just as he finds it to be at the southern end of the State. Something I have read in the past makes me think it is still better in Tennessee—and a material addition to the honey-resources there—as here it is not. Bees are only occasionally seen on it here; and the amount of their gatherings from it never totals much, I think. And I am just illiberal enough to suggest that, even down in Hamilton County, that strong and peculiar smell he notices at the hives comes from some entirely different plant. Page 785.

RETARDING FOUL BROOD WITH NAPHTHALENE.

Comrade Dudley has a brilliant plan to *retard* foul brood by vapor of naphthalene until the apiarist can cure it at his leisure and convenience. Prof. Cook, as it seems on page 786, thinks the vapor would have to be strong enough to drive the bees out to do it. Apparently there is a bad misprint in that article. As 33 to 1,000 is not "one in 3,000," presumably the first figures should read 0.33.

THOSE QUEEN-EXCLUDERS.

Mr. H. H. Hyde seems to hate 'em bad—those queen-excluders—and so back into heathenish darkness he would have us all go. Page 786.

KEEPING MICE OUT OF STRAW MATS.

Mice kept out of a stack of straw mats in summer by plenty of ashes in each interval. Sir Mouse can't nibble in such a stack without getting his fur full of ashes, which would soon mean a sore skin—ergo he decamps directly. Quite an invention; altho the fuss of building the stack must be considerable. C. P. Dadant, page 787.

HIVING SWARMS WITH NUCLEI.

Dr. Miller "has the drop" on Mr. Doolittle as to four carefully observed cases of hiving swarms with nuclei without special precautions. All the same Mr. Doolittle's way is far the safest for the boys to follow, and the precautions are not burdensome. Page 788.

BOILING FOUL-BROODY HONEY.

Dr. Mason's saying, on page 789, that to *boil* foul broody honey is sufficient, regardless of the time, marks very decidedly one of the phases of opinion on an important point. I think a majority of authorities incline to favor the long boiling. Quite possibly this divergence arises partly from the difference between laboratory work and out-in-the-yard work. Spores which a laboratory man could coax back into life may be that far gone that they are not dangerous in the yard.

BEES AS STRAWBERRY POLLENIZERS.

The pollenization of flowers by bees is all right. The importance of the thing both to the bee-man and to the general public is very great. We are doing just right to keep up considerable racket about it, lest folks forget somehow. Still, I must scold a little about that editorial quotation on page 793, where W. H. Jenkins thinks he lost several hundred dollars in strawberries for lack of bees—fruit mostly buttons instead of luscious berries. Now if Mr. Jenkins

sees bees habitually on the strawberry bloom where he lives, I'll take back what I'm saying as far as he is concerned; but the probability is that he does not. It is quite rare. Our bees are wonderful creatures, but they are not equal to the task of doubling the strawberry crop by looking on from a distance. My impression is, that the pollen of the strawberry is not adhesive, but circulates with the wind freely, and that the insects that help in strawberry pollenization are mostly minute insects, which escape general observation by being so small. Certainly magnificent berries in great quantities are often produced—nay, usually produced—without a bee touching the patch at all.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.)

Stimulative Feeding in the Spring.

Next spring I would like to try stimulative feeding on two colonies of bees, and, when they are strong enough, divide them and buy a queen for the queenless half.

1. How early should I begin to feed?
2. How much feed should I give at a time?
3. What time of the day should I give the feed?
4. Should I use two stories for brood, or one?

I have "Langstroth on the Honey-Bee" to explain dividing. IOWA.

ANSWERS.—1. Begin after bees are flying freely about every day. If you begin when it is cold and chilly, the bees will be induced to fly out when it is too cold for them, and the number chilled and lost will not be made good by your feeding.

2. Give half a pint to a pint of thinned honey or sugar syrup daily.

3. In the evening. Less danger of robbing then, and the bees will not be so much excited to fly if the weather is a little cool; but you may better not feed when weather is too cool.

4. Use one story till it is full; then a second; altho there is no harm in having a second before it is needed.

5. Keep studying your "Langstroth" carefully, and you will not get very far astray.

Italianizing Black Colonies of Bees.

I have 26 colonies of black bees in dovetail and Langstroth hives; also one colony of Italians whose queen I got from Ohio last spring. I introduced her successfully, and she soon had a very strong colony of pure Italians. Next spring I wish to Italianize or hybridize my black colonies, as I find they are unable to protect themselves against the robbing Italians. I would like the best and simplest method of doing so, for one of limited experience. WIS.

ANSWER.—The first thing of importance is to study well some of the fundamental principles that you will find in your text-book, the mastery of which will be worth to you the cost of the book several times over; and then you can better tell just what plan will best suit you.

As you probably allow your bees to swarm, here is a plan that will work well with one having little experience:

See that your Italian colony, which we will call No. 1, has plenty of stores in spring so it will breed up strong, and give it brood from other colonies so as to get it to swarm first. When it swarms, put the swarm on the stand of No. 1, and set No. 1 in place of another strong colony, say No. 2, setting No. 2 in a new place. No. 1 will thus get the flying force of No. 2, and in two or three days will be nearly as strong as it was before. In a week or 10 days a young queen will emerge, and a swarm will issue from No. 1. HIVE the swarm on the present stand of No. 1, and put No. 1 in place

of say No. 3, putting No. 3 in a new place. No. 1 will swarm again in a day or two, when No. 1 will be replaced by its swarm, and you will put No. 1 in place of No. 4. Next day or so another swarm will issue from No. 1, and you will proceed as before, so long as No. 1 sees fit to swarm. That will give you 5 or 10 swarms with young queens that are daughters of your best queen.

Now let us go back to the time of the first swarm. When No. 1 swarms, instead of letting the swarm be satisfied with an empty hive, fill up the hive with brood from other hives, and by strengthening it sufficiently it will be likely to swarm again in a short time, when the story can be repeated as before; and this can be kept up till you have as many as 27 colonies with improved queens. By following up the same thing each year, you will soon work out all the black blood; at least to such an extent that you will have no pure blacks.

Of course, there are other ways by which you can have all changed the first year, but this is intended as an easy and safe way for an inexperienced operator.

A Bunch of Beginners' Questions.

1. What is the "Golden method" for producing comb honey?

2. In artificial swarming, say I had 5 colonies and 5 empty hives, can I take out 4 frames (I have 8-frame hives) of brood, put them into hives containing 4 frames of full sheets of foundation, replacing the frames I took out with 4 frames of full sheets of foundation? Will the brood I put in the empty hives hatch out all right without any bees, nurses, etc.? Should I shake off the bees into the old hive before I put them into the empty hive? How about a queen for the new hive? Should there not be some queen-cells to hatch out also, in the four frames I transfer to the empty hives?

3. Can I easily know a queen-cell?

4. Are there queen-cells in every frame of brood-comb?

5. I intend to work for comb honey—swarming conditions being best for comb honey—would it weaken the worker-force by removing the four frames of brood, especially if I did not shake off all the bees into the old hive?

6. I don't quite understand about cutting out cells and putting in queen-cells, etc.

7. About the Heddon method of transferring—the box that is to be placed on top to drum the bees into—the top of the hive I suppose is taken off; is the box to be large enough to fit the whole top? If not, what is to prevent the bees from flying out around the sides of the small box? Is the bottom of the box all open, or just a hole for the bees to go into the box? How would it do to have a window in the top?

SOUTH CAROLINA.

ANSWERS.—1. You will find the "Golden method" fully described in this journal for 1899, pages 4, 33, 65, and 97.

2. No; to put frames of brood without any bees in a new hive will be only dead loss. Don't think of trying to make new colonies at all until you know more of first principles by studying a good text-book. If your friend, whose journal you read, has no text-book to lend you, it would be a very nice thing for you to get a book to lend him. You need both a bee-journal and a text-book; but you should have a book first if you must get along without one of the two.

3. You will have no trouble whatever in knowing a queen-cell the first time you see one. If you see on a comb something that looks like a peanut made of beeswax, that's a queen-cell.

4. There may be one or more queen-cells on one comb and none on the rest. There may be queen-cells on every comb in the hive. There may not be a queen-cell in the whole hive, and most of the time there is none present. Generally, however, rudimentary cells, or cell-cups are present. But a complete queen-cell will be found only when the bees are rearing a young queen.

5. Every cell of brood removed will weaken the future force, the time when such weakening comes depending upon the age of the brood removed.

6. You will probably have no difficulty in understanding all about it from your text-book. The object of this department is to supplement the text-book, and anything not clearly understood from your text-book will be most cheerfully answered here. You will easily understand that if all the things of the text-book are answered here, it would take up all the room, for beginners are coming into the family with every number, so the whole journal would be taken up with things that can be found in the books, and the journal

would be of no value to any one who has such a book in his possession. This is by no means meant to discourage questions; they are gladly welcomed; only let them come after reading the text-book.

7. When bees are to be drummed out of a box-hive, the box-hive will usually be found with no bottom nailed on; so the hive is turned upside down and the drumming-box placed over. If the box is not of the same size as the hive, then there must be some sort of adjustment by means of pieces of board or cloth, the particular adjustment depending upon the difference between the box and the hive. Later, however, it is not considered necessary to have a close fit; a little smoke will prevent the bees flying out, and the bees may be driven with a large open space unprotected. The more free the passage from the hive to the box the better. A window would hardly be worth the trouble, and is not necessary.

What Makes a Laying Worker?

What is a laying worker? Is it a worker fed a few days as a queen, or can any worker lay eggs? I have several times had colonies that became queenless when there was no brood in the hive, and such colonies never develop laying workers. This generally occurred in the fall, during a time when the queens were not laying. The bees would live until they were robbed out or died out in the spring, and never develop any laying workers.

I tried the experiment of putting a frame of brood, just ready to seal, in one hive, after which it produced laying workers. I also took from a strong colony its queen and all of its brood, and left it in that condition for 30 days, and no laying workers appeared. I then gave them some old brood, and in due time they developed laying workers.

I do not claim that the above experiments prove any thing, as bees do not always do things exactly the same, but I would like to know what some of the leaders think about it.

OREGON.

ANSWER.—Answering the spirit of your question, I must say I don't know what it is that makes a laying worker. It was formerly held by some that in some way, perhaps by being near a queen-cell, a young worker got enough royal jelly to enable it to lay eggs. Perhaps no one holds that opinion at the present day. It can hardly be that it is "a worker fed a few days as a queen," for the scientists tell us that for the first 3 days queens and workers are fed alike, the worker being weaned or fed on coarser food after the first 3 days, while the queen has the same diet continued during the remaining two days of her larval life. So you see if a worker were fed two days more than usual on royal jelly, she would be a queen complete.

Your own observations seem to show that workers may take up the business of egg-laying rather late in life.

It was formerly thought that a single laying worker did all the business. Then it was thought there might be several, and within a few years actual dissection has shown that a large number, if not the majority of workers in a colony, may be engaged in egg-laying.

The time of year and existing conditions may make quite a difference as to the matter of workers promptly taking up the egg-business. The kind of bees also has something to do with it. In some cases a colony may be queenless a long time with no laying workers. In other cases they may begin laying while a young queen is present but not yet laying.

All things considered, it seems not unreasonable to believe it is possible that any worker may get to laying, but just what conditions are necessary to make that possible I don't know.

York's Honey Calendar for 1900 is a 16-page pamphlet especially gotten up to create a demand for honey among should-be consumers. The forepart was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample free; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for \$2.00; 500 for \$3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.



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NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound. Also some other changes are used.

The National Pure-Food Congress will hold its annual meeting in Washington, D. C., March 7, next. We hope that Rev. Emerson T. Abbott will again be sent to represent the interests of bee-keepers. He has done so excellently in the past in that line, and knows exactly what is needed in pure-food legislation, that he should be continued a member of the Congress so long as there is a necessity for its existence—and that will likely be for some time yet, judging from the slow way in which righteous laws have been enacted and enforced in the past.

A Black and Blue Bee Journal.—Referring to the correspondent in the Canadian Bee Journal, who wants all reports of big crops excluded and failures honestly published, the American Bee-Keeper says:

"We do not know of a bee-paper that does not honestly publish failures, but if the world is to have a journal that chronicles only failures, its pages, to be appropriate, should be a sombre blue, with a cover of black crape, and its title 'Blasted Hopes.'"

Apis Dorsata has a faithful adherent in the American Bee-Keeper. Referring to Dr. Mason's comments in the Bee-Keepers' Review, it is not discouraged by the reports that come as to the failures to domesticate the big bee in other countries. It says: "What Australia, Holland or China may think or want in relation to this matter is of no

concern to America." In Australia the paramount question is, "not to secure more honey, but rather to develop a market for that already on hand and now coming in." So the American Bee-Keeper can understand that Australians may not want to have more honey gathered.

After all, does not a bee-keeper in Australia think, "I'd like to have my crop increase as much as possible, but I don't care to have the entire output increase in proportion?" And will the American Bee-Keeper name the bee-keeper in this country who doesn't think exactly the same thing?

Six Thousand Dollars Cleared on Bees.—Sometimes a man invests in bees and loses money by it. Sometimes a man makes money by it. Much depends upon the man as well as his opportunities. N. C. Alford, a Colorado bee-keeper, is one of the successful kind. He says in Gleanings in Bee-Culture:

"I commenced the business without knowing anything about bees, and was in the business eight years, and cleared \$6,000 in that time, after paying for the bees and all the supplies and labor hired. I liked the business, and it paid well; but I got to be 65 years old, and two years ago I sold my bees, as I had 1,000 acres of land in cultivation, and 500 head of cattle, and am a director in the Poudre Valley bank. I did not allow my bees to swarm. I took out the queens in June. I ran about 260 colonies most of the time."

The Automobile for Bee-Keepers.—Rambler gives in Gleanings in Bee-Culture a glowing account of the way in which the automobile may be used by bee-keepers. It is no doubt sportively meant, but it would not be stranger than some other things that have come to pass if it should all come true. With an automobile one is entirely free from anxiety lest the motive power should run away or capsize the load because of a sting from a loose bee, and this applies not only when the bees are to be hauled, but when a horse is to be used in any way about an apiary. Migratory bee-keeping will be encouraged with better roads and greater speed that will come. The automobile can be jacked up so the wheels will not touch the ground, and can then run a saw or other machinery. It can also be used to run a washing-machine, churn, sewing-machine or honey-extractor! It might also be used to ramble the Rambler around.

Ice-Houses Instead of Cellars for Bees.—We received the following from Mr. I. N. Hoagland, one of our New York State subscribers:

EDITOR YORK:—I clipped the following from a paper called The Household, published in Boston:

SHIPPING BEES IN ICE.

It is not generally known that a great many insects can live for weeks in a state of suspended animation under the influence of cold. Flies and beetles can stand an intense degree of cold, and yet revive if slowly thawed out. This fact has been taken advantage of lately in the shipping of bees.

Different varieties of bees are often sent from England to her colonies, but cost heavily to send alive with plenty of food. Now they are frozen, packed quite firmly in a very small box, and thawed out on their arrival.

A number of bumble-bees have recently been shipped to New Zealand in this manner, where they are found most useful in fertilizing the red clover that has lately been introduced into that colony.

If the above be true, would it not be well for us bee-keepers to build ice-houses instead of cellars and caves for our bees? What a boon it will be to the apiarist, when the process for liquifying the air becomes cheap, and we can freeze the air in a hive of bees and thaw them out in the spring, without any loss of bees or honey!

My experience rather confirms the plan, for I winter my bees about 100 feet high in the open, on the roof of a building; and as cold as it was last winter, they came out in the spring all right.

I. N. HOAGLAND.

It is not so very strange that such things can go the rounds of respectable papers. Outsiders know very little about bees, even those that are smart enough in other things to make good editors. They think, "If other tiny

creatures can remain frozen all winter and come out all right in the spring, why not bees?" Indeed, bees may be frozen for a short time and come out alive, but to be frozen long enough to be sent from England to some English colony is quite another matter.

The Weekly Budget

REV. EMERSON T. ABBOTT is again at the head of the editorial department of the *Modern Farmer*. It is now expected to make of it a good agricultural paper. We trust its publishers will be successful in their venture.

MR. E. T. FLANAGAN, of St. Clair Co., Ill., on Jan. 8, sent us a newspaper clipping telling of the 12-year-old son of a farmer living near Mitchell, Ill., who was stung into insensibility by a colony of bees late Saturday night, Jan. 6. The boy's father had just bought the bees and put the hive in the yard between the house and the barn temporarily, the morning before the accident occurred. That night, the son, on going to the barn on an errand, ran against the hive and upset it. The weather being warm the bees just covered the boy and stung him almost to death before they could be smoked off.

Mr. Flanagan wrote: "The unusual case of one being stung nearly to death in the dead of winter, here where it is at that time so cold, is an event out of the ordinary." We should say it is an unusual occurrence, and a sad one, too.

Mr. Flanagan reported his own bees wintering well, having had a fine flight the day he wrote.

MR. J. H. MARTIN, of Los Angeles Co., Calif., when writing us Jan. 3, mentioned several things besides business, as follows:

FRIEND YORK:—This is a happy day for California bee-keepers, for we are having another nice rain. The rains have arrived in regular order so far this winter, and we have every reason to believe that we will have a good honey crop. We must have the latter as well as the early rains to give vigor to the honey-flora, and the early rains have been so bountiful that we will certainly get the latter. Northern California has received a great amount, so much that it has interfered with the fall and winter plowing, and sowing of grain.

January 1 I attended a parade that is characteristic of this part of the country, and which could be held in but few places in the United States. It was a "Tournament of Roses," and given in the city of Pasadena, nine miles from Los Angeles. It was a fine affair, and in the long parade the vehicles were lavishly trimmed with roses and other flowers. If you had dropt down here from Chicago you would have thought yourself in Fairyland. The skies were smiling, the breezes soft; there was no need of overcoats. There was an immense crowd of happy, smiling people, and any quantity of beautiful girls in vehicles so covered with flowers that they lookt like angels resting upon flower-clouds. I was extremely intoxicated with the odor of the roses. Some sons of Belial might say that the intoxication came from the rays from angelic eyes, sweet, laughing mouths, shapely heads, and saucy curls—but perish the thought!

When the cares of the "Old Reliable" are too much for you, and illness comes, seek these shores and we bee-men and the climate will do all we can to mend you. Don't be afraid of earthquakes—ours are of the mild order, and only now and then rattle down a building in some remote mountain fastness.

J. H. MARTIN.

We are glad to know that California is getting the much-needed rain again.

Many thanks, Mr. Martin, for your kind suggestion for us to seek the fountain of perpetual youth where you are, when old age and general worn-outness come upon us. What with fragrant flowers, health-resforing climate, and, above all, luscious, intoxicating girls—my, my, Mr. Martin!

No wonder you stay in California. But as most people are human, we'll forgive you this time.

But we don't know about those "mountain fastnesses" that seem to be really *fast* only when a good shaker of an earthquake doesn't come along, and then they become—well, "mountain 'loosenesses,'" we presume. No, thank you, we prefer to stay on solid ground a while yet. Still, if within a few years you should succeed in getting rid of the "shakers," and still have the climate and "angels," we'll promise to think seriously of accepting your generous invitation.

MR. J. B. WILHELM, of Seneca Co., Ohio, when renewing his subscription for 1900, wrote us thus encouragingly:

"Altho the last two years have been failures in the production of honey, still I have hopes for the future, and will not do without the *American Bee Journal*. It stands by us and defends our cause in time of plenty, and we should still do our part when we have but little. Success to the ever 'Reliable.'"

AMERICAN FRUIT AND VEGETABLE JOURNAL.—This is the name of a new monthly paper for fruit and vegetable growers, edited by Prof. T. H. Jones, associate editor of the *Farm, Field and Fireside*; but the new paper is in no way connected with the latter, which has this to say of Prof. Jones:

"Born in Ohio, Mr. Jones came with his father as a boy to a farm in Wayne Co., Ill. On the farm was an orchard of some 150 varieties or more of choice fruits planted by Samuel Haliday, father of Haliday Bros. This afforded an excellent object-lesson in fruit-culture. The young man saw that region greatly develop in the planting of orchards. After ups and downs, and a conflict with many pests in 1883, a wonderful crop of choice fruit was harvested, which was sold for some \$5,000. This proved that Wayne and neighboring counties were adapted to fruit. The Jones fruit farm became well known in the State.

"Prof. Jones was educated at McKendree College, Lebanon, Ill., graduating in 1880. He has ever since been more or less occupied with horticulture, tho for ten years a teacher or superintendent of public schools, or a professor or president of a college. In 1886 he went to Kansas, and with a partner planted 175 acres in fruit, mostly in apples. He still retains a large interest in this orchard. In Kansas, also, Prof. Jones was connected with important educational institutions, and in 1896 returned to Illinois to take the presidency of the Orchard City College at Flora. As is well known, this is located in the midst of an apple-growing region.

"During his educational work Prof. Jones has had experience as an editor, and as will be noted, has kept up a practical connection with fruit-culture and with gardening in general. He is familiar with the orchards of Missouri, Kansas, Illinois, and other States, and has an extensive acquaintance with nurserymen and farmers interested in these branches of horticulture."

A sample copy of this new fruit and vegetable journal may be had by addressing Prof. T. H. Jones, 713 Masonic Temple, Chicago, Ill. We have made a very fortunate arrangement, so that we can offer our readers the *American Fruit and Vegetable Journal* with the *American Bee Journal*—both for one year at the price of our journal—\$1.00—to one who pays his subscription to the *Bee Journal* a year in advance. The price of the new paper is 50 cents a year. Or, we will give, as a premium, a year's subscription to the new paper to the one sending us one new subscriber to the *Bee Journal* for a year—with \$1.00. To any one interested in the growing of fruit and vegetables the new monthly will be extremely valuable. And as bee-keeping and fruit-growing go so well together, every bee-keeper ought to have both the *American Bee Journal* and the *American Fruit and Vegetable Journal* regularly.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the new bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the *American Bee Journal* at \$1.00.

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BEE-BOOK

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Journal of Agriculture,
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A wide-awake, practical Western paper for wide-awake, practical Western farmers, stock-raisers, poultry people and fruit-growers, to learn the science of breeding, feeding and management. Special departments for horses, cattle, hogs, sheep, poultry and dairy. No farmer can afford to do without it.

It stands for American farmers and producers. It is the leading exponent of agriculture as a business, and at the same time the champion of the Agricultural States and the producer in politics. **Subscription, One Dollar a Year.**

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Crystallization of Beeswax, according to a new theory advanced in the British Bee Journal, is to be credited with the hexagonal form of cells in honey-comb. Editor Cowan, however, gives pretty good reasons why it is not reasonable to put faith in the new theory.

Hunting Wild Bees in Winter.

—When a thaw comes, the bee-keeper may hunt for bee-trees, the best time being the day after the thaw, when there is a crust on the snow that will hold up a man. When a bee is found, the hunter circles around the bee till more are found, the bees being plentier on the side toward the tree. Under the tree they will be found in plenty, the largest number on the side opposite the wind.—Bee-Keepers' Review.

Bee-Keepers' Sins.—Ten of them are enumerated in Rheinische Bienenzeitung as the prevailing ones:

1. Wintering weak colonies.
2. Not allowing sufficient stores for winter.
3. Not packing colonies warm enough for winter.
4. Not uniting weaklings in spring.
5. Making untimely artificial swarms.
6. Extracting honey at the wrong time.
7. Using foundation too sparingly.
8. Selling honey at too low price.
9. Lazily attending conventions.
10. Being selfish about imparting information to others.

That last is not a common sin this side the water.

Watering Bees.—Morley Pettit gives in Gleanings in Bee-Culture a plan by which he thinks the bees are sure of getting water that is always clean in a convenient way. He says:

"What we have found to be the most complete watering-place is made from a wooden bucket, a piece of match flooring 10 or 12 feet long, and a few stakes. With an inch auger, bore a hole in the side of the bucket as near the bottom as possible. Take a piece of pine and trim the end until it just fits the hole water-tight. Then bore a hole in the end, half an inch across, and an inch deep. In the bottom of this hole make a gimlet-hole, also an inch deep. Now saw off this two-inch piece. This gives a round piece of pine, one inch in diameter and two inches long, having a hole thru it lengthwise half an inch at one end, and about the size of an ordinary nail at the other. Use this to plug up the hole in the bucket, putting the end with the large hole in first, and allowing the other end to project for a spout. A nail placed loosely in the gimlet hole will regulate the flow. Drive 3 stakes in the ground to form a stand. Set the bucket on these, and a shade-board will complete the fountain.

"The piece of flooring placed on edge with the groove up is the trough. Have one end slightly elevated to give a good fall, and allow the water from the fountain to drip into the higher end of the trough, and run along the channel. The whole should be high enough so that a pan or pail can be set to catch the water as it flows from the lower end. Allow the water to flow freely enough to make a good current along the channel. If the bucket and trough are thoroly washt every morning the bees with clean water all day."

The Long-Ideal Hive is used by a comparatively small number of bee-keepers in this country, altho largely used in Germany. Instead of adding stories to give more room, the room is gained by spreading out laterally, 25 or more Lang-

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WE HAVE IT AT LAST!

We have finally succeeded in getting a SMALL quantity of the seed of the **YELLOW** variety of sweet clover. This kind blooms from two to four weeks earlier than the common or white variety of sweet clover. It also grows much shorter, only about two feet in height. It is as much visited by the bees as the white, and usually comes into bloom ahead of white clover and basswood. We offer the seed as a premium

A QUARTER POUND FOR SENDING ONE NEW SUBSCRIPTION.

So long as it lasts, we will mail a quarter pound of the seed to a regular paid-up subscriber who sends us **ONE NEW** subscriber for the American Bee Journal one year, with \$1.00.

We have been trying for years to secure this seed, and finally succeeded in getting it. It is new seed, gathered last season by an old personal friend of ours, so we know it is all right. But we have only a small supply. When nearly out we will mention it.

GEORGE W. YORK & CO.

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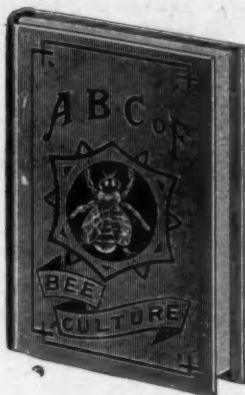
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The ABC of Bee-Culture!

Revised in 1899

Three thousand sold in three months.....

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Root's A B C—the 67th thousand! Who ever could have imagined it? But then, this is a book which requires to be known before the fact of its enormous circulation can be realized. And when once known it is a book to be prized beyond many others, for its complete, interesting and practical nature. "A cyclopaedia of everything pertaining to the care of the honey-bee" is very truth; a book of fine views and photographs, almost; illustrations of all the inside machinery used in one of the largest bee-supply factories in the world. Almost every bee-man wants to know is given in precise alphabetical order, while its exceptionally clear type is brought out in the true American style of excellence. If there is any book on apiculture that may be thoroughly recommended, it is this of The A. I. Root Co., Medina, Ohio.—BEE-CHAT, LONDON, ENG.

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For 1900.

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Mention the American Bee Journal.

THE A. I. ROOT CO.,

Watch this column next week.....

MEDINA, OHIO.

stroth frames being used in the one story. Perhaps the most prominent user of long-ideal hives in this country is the veteran O. O. Poppleton, who prefers this kind of hive for extracted honey, having used it extensively in Iowa, Cuba and Florida. In reply to an inquiry, he says in *Gleanings in Bee-Culture*:

"The dimensions of the long-ideal hive can be varied to suit any style of frame one wishes to use, keeping at least two points in view, viz., that the frames in use in them should be at least two or more inches deeper than is the standard Langstroth frame, and the hive should be long enough to hold as much comb in the aggregate as at least 25 Langstroth frames will hold. These are the essential differences between any simply made standard hive and the long-ideal.

"The hives I have in use are made of four boards 13 inches wide, front and back ones being 36 inches long, and the ends 15 inches. When nailed together the inside measure is 13 inches deep, 13½ wide, and 36 long. Entrance to hive is 1½ x 12 in the center of the lower edge of the front. The two sides have rabbets in the inside of the upper edge ½ x ½, for ends of top-bar of frames to rest in. I use a tight bottom-board projecting in front 1½ to 3 inches. Tight bottom-boards are a necessity with me because I practice migratory bee-keeping, but are not essential. Like the Dadants, I prefer the old-style telescopic cover. I couldn't be induced to use any other kind; but these are not essential to this system. Any style of cover works the same on these hives as on any other.

"The frames I use are 12 inches square, inside measure; but for Mr. Emory, or any one else wishing to test this style of hive on a small scale, I would advise his using the extra-deep Langstroth or Hoffman frame now being made for use in the Draper barns. In case he should ever wish to do so they could be easily changed to the standard size by cutting off the bottoms of the end-bars. The dimensions of the hives in case those frames are used would be the same from front to rear as in the Simplicity hive—enough deeper to fit the deep frames, and not less than 30 inches long, inside measure."



Results of the Season of 1899.

I commenced in the spring with about 80 colonies of bees, rather weak. They built up slowly, owing to bad weather, increased to 100, and got about 1,200 pounds of good honey, mostly all extracted. I united for winter down to about 80 again, as that is about the number that I care to keep, as I farm for a living.

A. J. McBRIDE.
Watauga Co., N. C., Dec. 23, 1899.

Hoffman Frames—Introducing, Etc.

I think the Hoffman self-spacing frame is all right except the top-bar. The ¾ is too clumsy and heavy, and occupies too much of the honey space; costs too much for freight, etc. The beaded frame has similar objection, and besides fastening the foundation to this bar with the roller is too much trouble and sometimes causes loss. The ¾ bar is too light—liable to sag. What we want in all cases is the happy medium—½ inch, in my opinion would be right with sawkerf ¾ inch deep to receive the foundation or wood guide, as might be preferred. This, to my mind, would be the ideal frame, and as this is the hive that our supply manufacturers are preparing for the coming year, I think they should give this a consideration. I shall order this frame for my own use, and to supply my trade the coming season.

The side queen-introducing cage workt all right for me when placed on old comb. The bees will eat in, but don't bother them

HAMMOND'S

Michigan Northern-Grown Onion Seed.

I sold 55,000 lbs. of this seed in 1899. My customers report yields of 450 to 1,300 bushels of onions per acre from this seed. Some of them intimate that this seed is worth \$5 to \$10 per lb. more than the California grown seed sold by anybody. I guarantee this seed to be new and freshly grown. We have seed of all the seedling and standard varieties. We make special prices on large lots. Onion sets of all varieties. Buy direct from the grower. Catalogue—extended and illustrated—free.

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Box 2, FIFIELD, MICH.

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To get new customers to test my Seeds, I will mail my 1900 Catalogue, filled with more bargains than ever and a 10c Due Bill good for 10c worth of Seeds for trial absolutely free. All the Best Seeds, Bulbs, Plants, Roses, Farm Seeds, Potatoes, etc., at lowest prices. Nine Great Novelties offered without name. I will pay \$50. FOR A NAME for each. Many other novelties offered, including Ginseng, the great money making plant. Over 50 varieties shown in colors. \$1.00 in cash premiums offered. Don't give your order until you see this new catalogue. You'll be surprised at my bargain offers. Send your name on a postal for catalogue today. It is FREE to all. Tell your friends to send too. ●

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It is a matter of great convenience and a saving of labor for a farmer to have a low, handy wagon. They save more than half the labor of loading in hauling manure, hay, grain, corn-fodder, wood, stones, etc.



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Write to the Electric wheel Co., Box 16, Quincy, Ill., for their catalogue, which fully explains about these and their Electric Handy Wagons, Electric Feed Cookers, etc.

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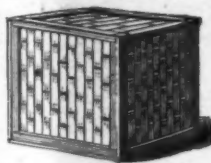
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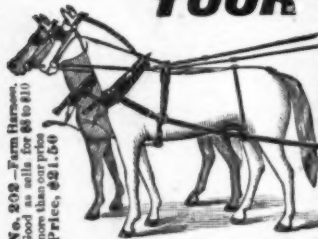
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filled with information gathered from the actual experience of practical and scientific breeders and feeders of cattle and pigs. He wants to know how other men get the best results; how to feed to the best profit; how best to utilize his skim milk; how to build up a first-class dairy from the resources he has; what crops to grow to keep up the flow of milk at all seasons.

Last year a patron of a Kansas creamery who read a dairy paper and kept good cows, made \$36.00 per cow more than the poorest patron of the same creamery who did not read a dairy paper. That means something; it shows the value of an up-to-date, reliable adviser like DAIRY AND CREAMERY. (Subscription 50 cts. per year.)

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AMERICAN BEE JOURNAL, CHICAGO, ILL.



A Further Offer:

We will give Dairy and Creamery for one year as a premium to any one of our readers who sends us one new subscriber to the American Bee Journal for one year at \$1.00. Unless these offers appear again after March 1, in these columns, they will be withdrawn at that date; so you would better take advantage of them at once. Address,

1D4t **GEORGE W. YORK & CO., 118 Mich. St., Chicago, Ill.**

 Don't fail to mention the Bee Journal when writing advertisers.

till the 4th day, when with but few exceptions all will be well.

Burlap bagging is best for packing over frames with corn-cobs across the frames to give passage over them. Then fill up the super with carpet, old clothing, or chaff, as most convenient. We winter our bees on the summer stands here.

The past fall was an ideal one—plenty of rain and snow, and not cold. The bees had an outing the other day.

I began last spring with 12 colonies—one of these queenless—and increased to 32 good, strong colonies. I reared some queens, bought some, and used quite freely of foundation. I took 500 pounds of alfalfa comb honey. Considering the amount of alfalfa that we now have in this part of Kansas, and the great amount of moisture that we are having, the coming season promises to be a boomer. Comb honey is retailing at 18 cents.

The "Old Reliable" is up to date, and if you are fortunate enough to be a subscriber and will read it you need not fail to be thoroughly informed, nor fail to enjoy this goodly land of milk and honey.

SILAS HARTER.

McPherson Co., Kan., Dec. 26, 1899.

Bees Didn't Do Well.

I like the American Bee Journal very much, and I would not be without it; it is a great help. Bees did not do much good last season in this part of the country—hardly enough to keep them, and I had to feed. I had four colonies in the spring, and increased to six by the nucleus plan.

W. C. STORTZ.

Mason Co., W. Va., Dec. 23, 1899.

Putting Bees in Early.

I saw in the American Bee Journal that some one put a few colonies of bees into the cellar Nov. 7. He thinks that is pretty early to put in bees, so he tried only a few colonies to find out how it works. He promises to give the results in the spring. I assure him that the result will be good, if it works with him as it does with me. I put my bees into the cellar Oct. 30. We had quite a warm spell after that, but I left them in, and they are all right now. I also will give the results next spring.

In 1898 I put them early into the cellar, and took them out late in the spring, and they came out all right. I never before saw such strong colonies in the spring.

This year has been a very poor one for honey here. When we first put the bees out there was a slight flow from poplar and maple, which was stored in the brood apartment. Next came dandelion, and white oats. These filled the hives up pretty well, and the bees began to cast swarms. When the flow was over there came a long spell that there was hardly anything for them to work on, before white clover and basswood came into bloom. Basswood did not last long, and it was too dry for clover, but buckwheat helped us out; it started brood-rearing for the fall, and filled up the brood apartment, so the bees have at least buckwheat honey to winter on. Buckwheat is sometimes quite a source of comb honey here, also for extracted. Jos. BETHEKE.

Sauk Co., Wis., Dec. 19, 1899.

Honey Season a Failure in 1899.

The American bottom in the vicinity of St. Louis seems to have been a failure the past season in the matter of honey. I lost 30 out of 65 colonies the winter of 1898-99. They had plenty of stores but it was too cold for bees on the summer stands. I obtained some more from a neighbor, started with 40, increased to 50, but got only about 50 pounds of comb honey. Bees got very strong on white clover—as strong as I ever saw—but after that there was nothing. Heartsease and smartweed they did not work on, and of Spanish needle I saw none. The fall asters, or whiteweed, were caught by frost as they were coming into bloom, and after that the bees did not visit them.

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WORK
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are scientifically perfect, a 200 size hatching more chicks than 30 hens and at a time when sitters are hard to get. As money makers, no apparatus will equal a **Successful Hatcher.** We are the largest exclusive manufacturers of standard incubators and brooders. Send 5 cents for our 150-page Catalogue, printed in 5 languages. Address:
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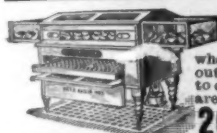
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This is a good time to send in your Beeswax. We are paying 24 cents a pound—CASH—for best yellow.

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when you know just how to proceed. When the course is mapped out for you by others of experience. When you are told just what to do and how to do it and what not to do. All these things are completely covered by the master hand of experience in our

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Bee-Plant Seed!

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The ABC of Bee-Culture says of it: "This is a beautiful plant for the flower-garden, to say nothing of the honey it produces. It grows from two to three feet in height, and bears large



Cleome in Bloom.

clusters of bright pink flowers. It grows naturally on the Rocky Mountains, and in Colorado, where it is said to furnish large quantities of honey."

We have a few pounds of this *Cleome* seed, and offer to mail a 1/4-pound package as a premium for sending us ONE NEW subscriber to the American Bee Journal, with \$1.00. Address,

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BEEES FOR SALE

200 Colonies at \$3.00 each.

In 8-frame dovetailed hives, two supers each, with fence separators complete. Good location, no failures, and no disease.

W. C. GATHRIGHT,

3A3t DONA ANA, NEW MEX.

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Choice kinds of Vegetable and Flower Seeds at 2c. per packet. Flower Plants, 5c. each. Many choice novelties. Don't buy until you have seen our new catalogue. Mailed FREE if you mention this paper.

IOWA SEED CO., DES MOINES, IOWA.

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FOR SALE

25 Colonies Italian and Hybrid bees in 10-frame dovetailed hives, straight combs in Hoffman end-spaced frames. Also about 190 Extracting Combs, same size as above. Bees guaranteed in good condition.

W. H. DANCER, Lamoni, Iowa.

Please mention Bee Journal when writing.

They went into winter quarters with plenty of honey to live on, principally from the white clover.

I think we are overstocked here with bees, but I will try one more season. White clover has come back again to us here; for 15 years we hardly saw any, while 25 to 30 years ago every place was white with it.

C. A. HAINES.

St. Clair Co., Ill., Dec. 29, 1899.

Laying Workers and a Remedy.

Where there is evidence of the existence of the pest, there are no nurse-bees, and the scant supply of field-bees is rapidly diminishing. By overcoming these two misfortunes the evidences of the existence of the troublesome insect will disappear.

REMEDY.—Give the colony a frame of hatching brood. In three or four days repeat the dose. After a like interval give it a frame of worker-eggs, and, if convenient, a queen-cell inserted in a West queen-cell protector. With me this remedy works satisfactorily. It may help our Indian Territory enquirer.

O. L. ABBOTT.

Fresno Co., Calif.

Still Dry—An Earthquake.

Everything points to another dry year here, yet there is plenty of time for an abundance of rain. Bee-keepers and dry ranchers have had a very hard time of it the past two years, but we still have great hopes for the future.

I enclose a clipping from my blackberry patch. This is a perfect morning, like your brightest day of June. But one thing happened to mar the beauty of the day. At 4:30 o'clock this morning, we experienced a severe earthquake, which destroyed two towns—San Jacinto, 23 miles from us, and Hemet, 20 miles away. No lives were lost, but buildings all torn down.

B. S. TAYLOR.

Riverside Co., Calif., Dec. 25, 1899.

[The sprig of blackberry had fragrant blossoms on it. We are glad to hear that no lives were lost thru the earth's trembling—EDITOR.]

Plain Sections and Fences.

I will here give you the results of a test between the fence and plain section, and the old style bee-way section and the solid separator.

I fitted up two supers, put in one side fences and plain sections, and in the other side the bee-way section and solid separator—that is, I put 12 of each kind of sections and separated them in each of the two supers. From one hive I got over twice as much honey as usual, and from the other nearly three times as much—from the side that was fitted with the fence and plain sections. The honey was taken out of both sides as fast as filled. So I think I want the fence in my supers. **JOSEPH E. MORGAN.**

Spartanburg Co., S. C., Dec. 25, 1899.

Had to Feed for Winter Stores.

The latter part of the summer (from the middle of August until the latter part of September) I was away from home, using the hot springs in South Dakota, to counteract the bad effects of la grippe, which had been fastening upon my system for the last 3 years, and I am happy to say that the water cure has had a most wonderful effect, inasmuch as I am greatly improved in my health.

But when I came home from the springs, expecting to extract at least 2,000 pounds of honey, I found to my astonishment that nearly all my bees were in a deplorable condition, yes, some even actually starving for the want of stores.

I went right to work, and fed in about a week's time 1,000 pounds of syrup, so that my bees are now in first-class condition. They had splendid flights Dec. 21 and 22, and also today.

Before going to the hot springs I took al-

most 1,000 pounds of extracted A No. 1 melilot (sweet clover) honey, and also some section honey. Having considerable dark honey on hand from last fall, I fed that, mixt with the best quality of sugar syrup, and thus I could sell all my melilot honey.

I now have the same number of colonies I had the commencement of the season—27 colonies in my standard hives with American frames, and 6 colonies in the new Heddon hives, with 12 queens of 1898 and 21 queens carefully reared in 1899.

WM. STOLLEY.

Hall Co., Neb., Dec. 23, 1899.

A Beginner's Experience.

I bought five colonies about two years ago, and have increased in the two years to 15. They are the first I ever owned, and I have had to learn by experience and the help of the American Bee Journal. My bees did but little good last season. I am not able to take the care of them that I would like to. I put the hives on a bench in winter, made about six inches high, set them as close together as I could, and put sacks on top and around them.

I sold my fall crop of honey at 15 cents a pound in the town of Asheville.

J. W. HAWKINS.

Buncombe Co., N. C., Dec. 27, 1899.

Cedar Hives—Moths.

I find in the American Bee Journal an enquiry as to red cedar for hives. I have used over 50 in my apiary for several years, and shall never use any other, no matter what the cost. There are several points of excellence in cedar hives—1st, they don't swell and shrink like those made of other lumber; 2nd, they keep drier; 3rd, they are lighter; and 4th, they don't warp as badly as pine. Give them a good coat of paint, and you will find them all right.

As to moths, keep good Italian bees, strong and healthy, and the moths won't bother.

R. G. HAUN.

Kittitas Co., Wash.

Bees Not Profitable for Him.

Bees have not been very profitable for em. I started with one colony three years ago, and have bought six colonies, all in box-hives, so I had to transfer to movable-frame hives. The first two years I didn't read any bee-literature, and I see now I made some grave mistakes. Every one who has only one colony of bees should read good literature on bees. A good bee-paper is very instructive whether a man keeps bees or not. I have read several this year, and decided the American Bee Journal comes nearer to what I need than any I have seen.

J. R. SCOTT.

Lamar Co., Tex., Jan. 1.

A Dry Season—Wiser Marauders.

The past season was the driest that we have ever had—not one rain from the middle of April till the middle of September—not more than a five or ten minute dash. Corn, beans, potatoes and hay were about half an average crop; clover was conspicuously absent.

My 70 colonies stored about 60 pounds of surplus, and I gave them 600 pounds of granulated sugar for winter stores.

I have kept an out-apiary of 12 colonies at a Mr. Light's, who then ran a custom-mill. While he was grinding my feed I would look after the bees. He moved away last fall, and the family that expected to move into his house in a week or two failed to do so. About the middle of January, during zero weather, some young men and boys were cutting and drawing ice from the pond near the apiary, and some of them opened the hives, took out frames of honey and jammed others out of place, and left off some of the covers, so the bees were in bad shape when I found them, except two. I did not dare to leave them there, so I moved them home Jan. 20.

I did not make much fuss, but found out

who were at work there, and who were looking on. By the middle of April all but three colonies were nearly dead, but the boys had said enough so I found out some of them that had disturbed the bees. I saw a good lawyer, and told him to write each one and give them a week to come and settle with me. They sent a man, and found out what I would take, and after some quarrelling among themselves, they raised the \$50 and paid me.

D. L. FILES.

Monroe Co., N. Y., Dec. 27, 1899.

Convention Notices.

Minnesota.—The Southern (Minnesota) Bee-Keepers' Association will meet in Winona, Jan. 23 and 24, 1900. E. B. HUFFMAN, Pres. Homer, Minn.

California.—The tenth annual convention of the California State Bee-Keepers' Association will be held in the Chamber of Commerce, at Los Angeles, Feb. 21 and 22, 1900. It will be called to order at 1:30 p.m., Feb. 21. At this time the railroads will sell round-trip tickets to Los Angeles and return for one and one-third fare, on account of the Industrial, Mining, and Citrus Exposition, which will be held in Los Angeles. Tickets good for 10 days. Let every bee-keeper bring some hive, tool or experience that he has found valuable, and we will have a good convention. J. F. MCINTYRE, Sec. Sespe, Calif.

Wisconsin.—There will be a joint convention of all Wisconsin bee-keepers' societies at the 16th annual meeting of the State Bee-Keepers' Association, Feb. 7 and 8, 1900, in the State Capitol, at Madison, Wis. Many prominent bee-keepers will be there and take part.

Excursion rates of a fare and one-third for the round-trip, for railroad tickets purchasable in the State, for over 50 cents each. Be sure to bring a certificate of each ticket purchasable so it can be signed Feb. 8, in Madison, and entitle the holder to a third fare return.

The State Horticultural and State Cheese-makers' Associations will meet on the same date in the Capitol.

Don't forget the date—Feb. 7 and 8. It will pay you to attend. N. E. FRANCE, Sec. Platteville, Wis.

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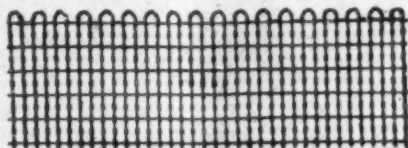
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HONEY AND BEESWAX**MARKET QUOTATIONS.**

CHICAGO, Jan. 8.—We quote best white comb at 15c; an occasional small lot of fancy sells at 16c; off grades of white, 12@14c; ambers, 10@12c. Extracted, 8@9c for fancy white; 7@8c for amber; 6@7c for dark grades. Beeswax, 27c.

Receipts are larger and the demand is not as good as it has been. R. A. BURNETT & Co.

CINCINNATI, Dec. 7.—There is a good demand for all kinds of extracted honey. White clover and basswood sell at 8@8½c; amber and Southern, 6@7c, according to quality and package. Fancy comb honey in no-drip shipping-cases sells at 15@16c; darker grades hard to sell at any price. Beeswax, 26c. C. H. W. WEBER, Successor to Chas. F. Muth & Son and A. Muth.

LOS ANGELES, Jan. 4.—1-pound frames, 12½@15c; 2-pound cans, 2 dozen in case, per dozen, \$2.50; 2-pound glass pails, per dozen, \$2.50. Extracted, water white, 60-pound tins, per pound, 8½c; light amber, 7½@8c; dark amber, 7½c. Beeswax, 25@26c.

KANSAS CITY, Dec. 9.—We quote No. 1 white comb, 13½@14c; No. 2, 13@13½c; No. 1 amber, 13@13½c; No. 2, 12@13c. Extracted, white, 7½@8c; amber, 7@7½c; dark, 5½@6c. Beeswax, 20@22c. C. C. CLEMONS & Co.

BUFFALO, Jan. 5.—Market bare of fancy white one-pound comb honey, and selling at 15@16c; fair to good, 12@14c; buckwheat, dark, poor, etc., 8@10c. Fancy pure beeswax, 28@30c.

BATTERSON & Co.

NEW YORK, Dec. 10.—Demand is very good for all grades of comb honey. Receipts are somewhat light and not up to former years. We quote:

Fancy white, 15 cents; No. 1, white, 13@14c; amber, 11@12c; and buckwheat, 9@11c, as to quality. Extracted remains firm at following prices: California white, 8½c; light amber, 8c; white clover and basswood, 8c; amber, 7½c. Very little trade for extracted buckwheat as yet. Southern, fancy, 7½c per pound; other grades, as to quality, from 70c to 75c gallon. Beeswax quiet at 26@27c. HILDRETH & SEGELKEN.

SAN FRANCISCO, Jan. 3.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@8c; light amber, 7@7½c; amber, 5@5½c; Beeswax, 26@27c.

Market is very lightly stocked with extracted of desirable grade, and is firm at the quotations, with no likelihood of supplies increasing during the balance of the season. Comb honey is in fair supply, considering it has to depend mainly on local custom, but values for same remain steady.

CLEVELAND, Dec. 1.—Fancy white, 16@17c; No. 1 white, 15@16c; No. 1 amber, 13@14c; No. 2 amber, 12@13c; buckwheat, 9@10c. White extracted, 8@9c. A. B. WILLIAMS & Co.

BOSTON, Dec. 8.—We quote as follows: Fancy white, 16c; A No. 1, 15c; No. 1, 13@14c; buckwheat will not sell in this city. Extracted, light amber, 7@8c.

There is very little now to report in the line of our honey market. The retail trade are loath to pay the higher prices and are buying in a very small way, still the demand is fully equal to the supply. BLAKE, SCOTT & LEE.

ALBANY, Dec. 10.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.

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OMAHA, Jan. 4.—Prices remain unchanged. Fancy white is still moving slowly at 14@14½c. Extracted, white, 8½c. Now that holiday trade is over and dealers have taken their inventory, they soon will be thinking of replenishing their stock and more lively trade is anticipated in the near future, but no material advance is looked for during January. PEYCKE BROS.

DETROIT, Jan. 11.—Fancy white, 16@17c; No. 1, white, 14@15c; dark amber, 10@13c. Extracted, white, 8c; dark and amber, 6@7c. Beeswax, 24@25c. M. H. HUNT & SON.

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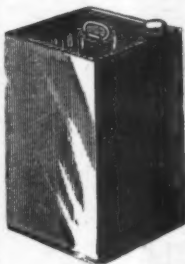
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